REMARKS

This paper is responsive to an Office Action mailed January 31, 2008. Prior to this response, claims 1-47 were pending. After amending claims 1-2, 4-6, 9-10, 13-15, 17, 19-21, 24, 27-29, 31-33, 36-37, 42-44, and 47, claims 1-47 remain pending.

In Section 1 of the Office Action, objections are made to the Abstract. In response, the title has been deleted from the Abstract page.

In Section 3 of the Office Action, claims 1, 3, 8, 14, 16, 24, 26, 31, 37, and 47 have been rejected under 35 U.S.C. 102(b) as anticipated by Mayer et al. ("Mayer"; US 6,449,003). The Office Action states that Mayer discloses all the limitations of claims 1, 14, 24, 37, and 47, citing col. 1, ln. 19, col. 4, ln. 39, and col. 8, ln. 56. This rejection is traversed as follows.

In col. 1, ln. 19-23, Mayer discloses a description of a prior art interlacing method where first and second fields are transmitted in *alternating* video frames. In contrast, the claimed invention recites a single video frame with 2 interlaced fields. To clarify that the recited top and bottom fields are not derived from alternating video frames, independent claims 1, 14, 24, 37, and 47 have been amended to recites that the top and bottom interlaced fields are both encoded in (decoded from) a first video frame.

In Fig. 1, Mayer describes two two-dimensional fields Z1 and Z2. Each field has a resolution of Zn lines, where each field corresponds to a 2-dimensional image (col. 3, ln. 66 – col. 4, ln. 10). When both fields are used, a 3-D image is created (col. 4, ln. 31-38). In Fig. 2, Mayer describes the conversion of a 3-D image that is transmitted using a PAL format (col. 4, ln. 60-64). The system uses vertical (V) and horizontal (H) line polarizations. "It

is critical that two successive lines are always polarized in *alternation* (emphasis added) in the one and other direction" (col. 5, ln. 8-15). Thus, Meyer discloses a system that transmits information as alternating fields of polarized lines. In contrast, the Applicant's process transports two fields simultaneously in a single video frame.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Mayer does not disclose a system where top and bottom fields are both encoded in (decoded from) a single video frame, as recited in independent claims 1, 14, 24, 27, and 47. Therefore, Mayer does not disclose every limitation of these claims. Since Mayer does not disclose explicitly disclose every limitation, he cannot anticipate these claims. Claims 3 and 8, dependent from claim 1, claim 16, dependent from claim 14, and claims 26 and 31, dependent from claim 24, enjoy the same advantages over the prior art, and the Applicant respectfully requests that the rejection be removed.

In Section 5 of the Office Action claim 13 has been rejected under 35 U.S.C. 103(a) as unpatentable with respect to Mayer in view of Berry et al. ("Berry"; US 6,081,270). The Office Action acknowledges that Mayer fails to fails to disclose the presentation a 2D image simultaneously with a 3D image. The Office Action states that Berry discloses such a feature, and that it would have been obvious to combine the 2D/3D display of Berry with Mayer to provide optimum ease of use and productivity in a single seamless user environment. This rejection is traversed as follows.

At col. 4, ln. 26, Berry discloses a 2D presentation plane used in conjunction with a 3D virtual world. Berry does not any details concerning the coding or transmission of information in a video frame.

An invention is unpatentable if the differences between it and the prior art would have been obvious at the time of the invention. As stated in MPEP § 2143, the *KSR International Co. v Teleflex Inc.* decision (82 USPQ2d 1385, 1395-1397, 2007) suggests 7 exemplary rationales to support a conclusion of obviousness, which include:

A) Combining prior art elements according to known methods to yield predictable results;

B) Simple substitution of one known element for another to obtain predictable results;

C) Use of known technique to improve similar devices (methods, or products) in the same way;

D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

E) "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;

G) Some teaching, suggestion, or motivation in prior art would have lead one of ordinary skill to modify the prior art reference or the combine prior art references teachings to arrive at the claimed invention.

The Office Action states that modifications to Mayer have been obvious to one of ordinary skill in the art in light of Berry. This rejection appears to be most closely grounded in the G) rationale - Some teaching, suggestion, or motivation in prior art would have lead one of ordinary skill to modify the prior art reference or the combine prior art references teachings to arrive at the claimed invention.

With respect to this rationale, MPEP 2143 (G) states that the rejection must articulate the following criteria to resolve the *Graham* factual analysis:

(1) a finding that there was some teaching, suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings;

(2) a finding that there was a reasonable expectation of success; and

(3) whatever additional findings based on the Graham factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

With respect to the above-referenced first factual analysis criteria, the Berry reference has been combined with Mayer based upon the assumption that Mayer discloses every limitation recited in Applicant's claim 1. However as noted in response to the anticipation rejection, Mayer does not disclose a system where top and bottom fields are both encoded in (decoded from) a single video frame. Berry does not disclose this limitation either. Therefore, even if elements from Berry are combined with Mayer,

that combination does not explicitly disclose every limitation of claim 1. Claim 13, dependent from claim 1, enjoys the same advantages.

The Office Action states that it would have been obvious to combine the 2D/3D display of Berry with Mayer to provide optimum ease of use and productivity in a single seamless user environment. However, the motivation of increasing productivity does not suggest an actual means that would permit a practitioner to enable such a feature. More explicitly, such a motivation does not suggest modifications to Mayer that would enable a system where top and bottom fields are encoded in (decoded from) a single video frame, since Berry does not discuss a means of encoding information that can be simultaneously used for 2D and 3D presentations.

A *prima facie* analysis of motivation is especially critical in the present circumstances since the rejection is predicated on limitations that are not explicitly disclosed in the prior art references. The claimed invention can only be obvious if an artisan makes substantial modifications to the Mayer reference. However, there is nothing in the Berry reference that suggests these modifications.

Neither does the obviousness rejection provide evidence that such modifications would have been obvious to one with skill in the art based upon what was well known at the time of the invention. "(A)nalysis [of whether the subject matter of a claim would have been obvious] need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41, 82 USPQ2d 1385, 1396 (2007). However, if the *prima facie* rejection is supported by what was known by a

person of ordinary skill in the art then additional evidence should have been provided. Notable, when the source or motivation is not from the prior art references, "the evidence" of motive will likely consist of an explanation or a well-known principle or problem-solving strategy to be applied". *DyStar*, 464 F.3d at 1366, 80 USPQ2d at 1649. The Office Action does not supply evidence that it was well known at the time of the invention to use a system where top and bottom fields are coded in a single video frame.

With respect to the second analysis criteria needed to support the G) obviousness rationale, even if a practitioner were given the Mayer and Berry references as a foundation, no evidence has been provided to show that there is a reasonable expectation of success in the claimed invention. That is, there can be no reasonable expectation of success if the references, and what was known by artisan at the time of the invention, do not teach all the limitations of the claimed invention.

In summary, the Applicant respectfully submits that a *prima facie* case of obvious has not been supported since the combination of Mayer and Berry does not explicitly disclose every limitation of claim 1. Neither has a case been supported that Mayer can be modified to supply the missing limitations in view of Berry, or what was well known by a person of skill at the time of the invention. Therefore, the Applicant requests that the rejection of claim 13 be removed.

In Section 6 of the Office Action, claims 2, 4-5, 25, and 27-28 have been rejected under 35 U.S.C. 103(a) as unpatentable with respect to Mayer in view of Hannuksela (US 2004/0218816) and Wang et al. ("Wang";

US 2004/0096109). The Office Action acknowledges that Mayer fails to disclose MPEG2, MPEG4, and H.264 standards, but that Hannuksela and Wang disclose such a feature, and that it would have been obvious to use the coding standards disclosed by Hannuksela/Wang with the 3D system of Mayer to compress video information. This rejection is traversed as follows.

The Hannuksela and Wang references have been combined with Mayer predicated upon the assumption that Mayer discloses all the limitations of independent claims 1 and 24. However, as noted above in response to the anticipation rejection, Mayer fails to disclose a system where top and bottom fields are coded in a single video frame. Therefore, even if the compression protocols of Hannuksela and Wang are combined with Mayer, the combination still fails to disclose the above-mentioned limitations. Claims 2 and 4-5, dependent from claim 1, and claims 25 and 27-28, dependent from claim 24, enjoy the same advantages.

The Office Action states it would have been obvious to use the encoding and decoding methods of Hannuksela/Wang with Mayer to compress video information. However, this statement does not explain how a practitioner in the art could have modified the Mayer reference to yield all the claimed invention limitations. As explained above, even when combined, Mayer, Hannuksela, and Wang fail to disclose all of the claimed invention limitations. The above-quoted statement from Office Action does not explain how even a person with skill in the art could have modified Mayer's alternating H and V line polarizations to enable all the claimed limitations. Alternately stated, the Applicant's novel limitations cannot be inspired by a desire to compress data. Rather, there must be an explicit teaching in the Hannuksela and Wang references that shows a practitioner how Mayer can

be modified to yield the claimed invention. Such a *prima facie* case has not been made.

Since the combination of references neither explicitly discloses all the claim limitations, nor suggests modification to Mayer that would make all the limitations obvious, the Applicant requests that the rejection of claims 2, 4-5, 25, and 27-28 be withdrawn.

In Section 7 of the Office Action, claims 9, 15, 20, 32, 38, and 43 have been rejected under 35 U.S.C. 103(a) as unpatentable with respect to Mayer in view of Wiegand et al. (IEEE 2003). The Office Action acknowledges that Mayer fails to disclose MPEG2, MPEG4, and H.264 transmission standards, but that Wiegand discloses such a feature, and that it would have been obvious to use the encoding standards disclosed by Wiegand with the 3D system of Mayer to provide a bit rate savings. This rejection is traversed as follows.

The Wiegand reference has been combined with Mayer predicated upon the assumption that Mayer discloses all the limitations of independent claims 1, 14, 24, and 37. However, as noted above in response to the anticipation rejection, Mayer fails to disclose a system where top and bottom fields are coded in a single video frame. Therefore, even if the compression protocols of Wiegand are combined with Mayer, the combination still fails to disclose the above-mentioned limitations. Claim 9, dependent from claim 1, claims 15 and 20, dependent from claim 14, claim 32, dependent from claim 24, and claims 38 and 43, dependent from claim 37, enjoy the same advantages.

The Office Action states it would have been obvious to use the encoding methods of Wiegand with Mayer to improve bit savings. However,

this statement does not explain how a practitioner in the art could have modified the Mayer reference to yield all the claimed invention limitations. As explained above, even when combined, Mayer and Wiegand fail to disclose all of the claimed invention limitations. The above-quoted statement from Office Action does not explain how even a person with skill in the art could have modified Mayer's alternating H and V line polarizations to enable all the claimed limitations. Alternately stated, the Applicant's novel limitations cannot be inspired simply by a desire to improve bit savings. Rather, there must be an explicit teaching in Wigand reference that shows a practitioner how Mayer can be modified to yield the claimed invention. Such a *prima facie* case has not been made.

Since the combination of references neither explicitly discloses all the claim limitations, nor suggests modification to Mayer that would make all the limitations obvious, the Applicant requests that the rejection of claims 9, 15, 20, 32, 38, and 43 be withdrawn.

In Section 8 of the Office Action, claims 10-12, 21-23, 33-35, and 44-46 have been rejected under 35 U.S.C. 103(a) as unpatentable with respect to Mayer in view of Wiegand and Nelson (US 2002/0009137). The Office Action acknowledges that Mayer/Wiegand fail to disclose predictive frame information, but that Nelson discloses such a feature, and that it would have been obvious to use the predictive information disclosed by Nelson with the 3D system of Mayer/Wiegand to improve bandwidth efficiency. This rejection is traversed as follows.

The Nelson reference has been combined with Mayer/Wiegand predicated upon the assumption that Mayer discloses all the limitations of independent claims 1, 14, 24, and 37. However, as noted above in response to

the anticipation rejection, Mayer fails to disclose a system where top and bottom fields are coded in a single video frame. Therefore, even if the predictive encoding protocols of Nelson are combined with Mayer/Wiegand, the combination still fails to disclose the above-mentioned limitations. Claims 10-12, dependent from claim 1, claims 21-23, dependent from claim 14, claims 33-35, dependent from claim 24, and claims 44-46, dependent from claim 37, enjoy the same advantages.

The Office Action states it would have been obvious to use the predictive encoding methods of Nelson with Mayer/Wiegand to improve bandwidth efficiency. However, this statement does not explain how a practitioner in the art could have modified the Mayer reference to yield all the claimed invention limitations. As explained above, even when combined, Mayer, Wiegand, and Nelson fail to disclose all of the claimed invention limitations. The above-quoted statement from Office Action does not explain how even a person with skill in the art could have modified Mayer's alternating H and V line polarizations to enable all the claimed limitations. Alternately stated, the Applicant's novel limitations cannot be inspired simply by a desire to improve bandwidth. Rather, there must be an explicit teaching in Nelson reference that shows a practitioner how Mayer/Wiegand can be modified to yield the claimed invention. Such a *prima facie* case has not been made.

Since the combination of references neither explicitly discloses all the claim limitations, nor suggests modification to Mayer that would make all the limitations obvious, the Applicant requests that the rejection of claims 10-12, 21-23, 33-35, and 44-46 be withdrawn.

In Section 9 of the Office Action, claims 17-19 and 40-42 have been rejected under 35 U.S.C. 103(a) as unpatentable with respect to Mayer in view of Wiegand and Inuzuka et al. ("Inuzuka"; US 6,784,891). The Office Action acknowledges that Mayer/Wiegand fail to disclose transmitting an SEI option, but that Inuzuka discloses such a feature, and that it would have been obvious to use the SEI message of Inuzuka with the 3D system of Mayer/Wiegand to avoid encoding and sending information that is not used. This rejection is traversed as follows.

The Inuzuka reference has been combined with Mayer/Wiegand predicated upon the assumption that Mayer discloses all the limitations of independent claims 14 and 37. However, as noted above in response to the anticipation rejection, Mayer fails to disclose a system where top and bottom fields are coded in a single video frame. Therefore, even if the SEI message of Inuzuka is combined with Mayer/Wiegand, the combination still fails to disclose the above-mentioned limitations. Claims 17-19, dependent from claim 14, and claims 40-42, dependent from claim 37, enjoy the same advantages.

The Office Action states it would have been obvious to use the SEI message of Inuzuka with Mayer/Wiegand to eliminate the encoding and transmission of unused information. However, this statement does not explain how a practitioner in the art could have modified the Mayer reference to yield all the claimed invention limitations. As explained above, even when combined, Mayer, Wiegand, and Inuzuka fail to disclose all of the claimed invention limitations. The above-quoted statement from Office Action does not explain how even a person with skill in the art could have modified Mayer's alternating H and V line polarizations to enable all the claimed limitations. Alternately stated, the Applicant's novel limitations cannot be

inspired by a desire to eliminate the transmission of unused information. Rather, there must be an explicit teaching in the Inuzuka reference that shows a practitioner how Mayer/Wiegand can be modified to yield the claimed invention. Such a *prima facie* case has not been made.

Since the combination of references neither explicitly discloses all the claim limitations, nor suggests modification to Mayer that would make all the limitations obvious, the Applicant requests that the rejection of claims 17-19 and 40-42 be withdrawn.

In Section 10 of the Office Action, claims 6-7, 29-30, and 36 have been rejected under 35 U.S.C. 103(a) as unpatentable with respect to Mayer in view of Yun et al. ("Yun"; US 2003/0095177). The Office Action acknowledges that Mayer fails to disclose displaying a 2D image as an alternative to a 3D image, but that Yun discloses such a feature, and that it would have been obvious to use the 2D/3D mode selection of Yun with the 3D system of Mayer to permit a user to select suitable data. This rejection is traversed as follows.

The Yun reference has been combined with Mayer predicated upon the assumption that Mayer discloses all the limitations of independent claims 1 and 24. However, as noted above in response to the anticipation rejection, Mayer fails to disclose a system where top and bottom fields are coded in a single video frame. Therefore, even if the mode selection of Yun is combined with Mayer, the combination still fails to disclose the above-mentioned limitations. Claims 6-7, dependent from claim 1, and claims 29-30 and 36, dependent from claim 24, enjoy the same advantages.

The Office Action states it would have been obvious to use the mode selection of Yun with Mayer to permit a user to select suitable data.

However, this statement does not explain how a practitioner in the art could have modified the Mayer reference to yield all the claimed invention limitations. As explained above, even when combined, Yun and Mayer fail to disclose all of the claimed invention limitations. The above-quoted statement from Office Action does not explain how even a person with skill in the art could have modified Mayer's alternating H and V line polarizations to enable all the claimed limitations. Alternately stated, the Applicant's novel limitations cannot be inspired simply by a desire to select between 2D and 3D modes. Rather, there must be an explicit teaching in Yun reference that shows a practitioner how Mayer can be modified to yield the claimed invention. Such a *prima facie* case has not been made.

Since the combination of references neither explicitly discloses all the claim limitations, nor suggests modification to Mayer that would make all the limitations obvious, the Applicant requests that the rejection of claims 6-7, and 29-30, and 36 be withdrawn.

The Applicant asserts that prior art made of record, but not relied upon, does not read upon the claimed invention. It is believed that the application is in condition for allowance and reconsideration is earnestly solicited.

Respectfully submitted,

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